

REMARKS

By the present amendment, claim 1 has been amended to clarify that the first cutting pattern constitutes a pattern that does not form a detached element (whereas the first and second cutting patterns intersect to form the detached element).

Also, claim 1 has been amended to recite that the sheet passes (i) between the first cutting cylinder and the at least one anvil cylinder so as to form the first cutting pattern, then (ii) between the second cutting cylinder and the at least one anvil cylinder so as to form the second cutting pattern that intersects the first cutting pattern.

Claim 12 has been amended accordingly.

Claim 13 has been amended to be presented with separate paragraphs and to recite that the first cutting pattern constitutes a pattern that does not form a detached element, whereas the first and second cutting patterns intersect to form the detached element.

Also, claim 13 has been amended to recite the cutting cylinders are synchronized so that, when the sheet passes between the first cutting cylinder and the at least one anvil cylinder so as to form the first cutting pattern, then between the second cutting cylinder and the at least one anvil cylinder so as to form the second cutting pattern that intersects the first cutting pattern, the detached elements that constitute said elements of relatively small size are formed.

New claim 32 has been added to recite a single anvil.

Support for the added recitations is found in the original application, for example, at least page 6, lines 8-19.

Claims 1-32 are pending in this application. Claims 1, 12, and 13 are the only independent claims.

Art rejections

In the Office Action, claims 1-9, 11-18, and 20-31 are rejected under 35 U.S.C. 103(a) as obvious over US 5,697,649 to Dames et al. (“Dames”) in view of US 6,533,325 to Steidinger (“Steidinger’325”).

Further, claims 10 and 19 are rejected under 35 U.S.C. 103(a) as obvious over Dames in view of Steidinger’325 and further in view of US 6,350,342 to Steidinger et al. (“Steidinger’342”).

Reconsideration and withdrawal of the rejections is respectfully requested.

It is submitted that anvil cylinder 135 of Steidinger’325 is not a cutting cylinders because anvil cylinder 135 does not have any cutting thread. Namely, the person of the art would immediately recognize that anvil cylinder is the anvil counterpart to cutting cylinder 133, and not another cutting cylinder. For example, Steidinger’325 states at col. 9, lines 43-45 that “the edge of the die is crushed very slightly as it contacts the surface of the anvil cylinder 135 so that the height of the taller die is adjusted to cut through the card assembly.” Accordingly, the person of the art would immediately understand that anvil cylinder 135 of Steidinger’325 does not carry any cutting thread.

In contrast, in the presently claimed invention, each “cutting cylinder” is defined as “carrying at least one respective cutting thread that cuts one of the cutting patterns respectively,” as recited in each of present claims 1, 12, and 13.

In addition, the cylinders 133 and 135 of Steidinger'325 are not “in succession along a conveying path of the sheet” as recited in the present claims, because in Steidinger'325, they are at the same location along the conveying path of the sheet of Steidinger'325.

Further, it is submitted that, contrary to the assertion in the Office Action, it would not have been obvious to provide a second cylinder 133 in succession with the one shown on Fig. 2 of Steidinger'325.

In particular, the person of ordinary skill in the art would not have had any motivation to add a second cylinder because it would add costs and complexity, whereas cylinder 133 could be changed with the appropriate cutting dies, as taught in Steidinger'325 (see Steidinger'325 at col. 9, lines 39-42).

In addition, even if, arguendo, the person of the art had attempted to provide successive cylinders 133 (which is denied, as discussed above), this would not have resulted in the presently claimed invention, because Steidinger'325 would not have provided any motivation or guidance to equip the two successive cylinders 133 with first and second cutting patterns, respectively, “wherein the first cutting pattern constitutes a pattern that does not form a detached element, and wherein the first and second cutting patterns intersect so as to constitute a resulting pattern that forms a detached element,” as recited in present claims 1 and 12-13.

In contrast, the present inventors have discovered that two successive cylinders can be used to form a first cutting pattern that does not form a detached element, then a second cutting pattern that intersect with the first cutting pattern so as to form detached elements by the combined cuts formed by the intersecting cutting patterns. This simple and cost-efficient manner

of forming detached elements is an unexpected benefit of the present invention, which is not at all suggested in Steidinger'325.

Further, the other cited references fail to remedy the deficiencies of Steidinger'325. In particular, Dames is silent regarding synchronized cutting cylinders. Therefore, the present claims are not obvious over the cited references taken alone or in any combination.

In addition, with respect to the dependent claims, it is submitted that the cited references fail to teach or suggest the combined features of each of these respective claims.

In particular, with respect to claim 32, Steidinger'325 fails to teach or suggest first and second synchronized cutting cylinders, let alone a single anvil interposed between the first and second cutting cylinders, and even if, arguendo, the person of the art had attempted to provide successive cylinders 133 (which is denied, as discussed above), this would not have resulted in the presently claimed invention, because Steidinger'325 would not have provided any motivation or guidance to equip the two successive cylinders 133 with a single anvil interposed between the first and second cutting cylinders. Further, Dames fails to remedy the deficiencies of Steidinger'325.

Therefore, each of the dependent claims, and in particular claim 32, is not obvious over the cited references taken alone or in any combination.

In view of the above, it is submitted that the rejections should be withdrawn.

Conclusion

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

Application No. **10/589,001**
Art Unit: **3725**

Amendment under 37 CFR §1.114
Attorney Docket No.: **062842**

If there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

If this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to Deposit Account No. 50-2866.

Respectfully submitted,

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